

What to Study

Cell Division Unit

Be able to define and understand the following terms:

- Cell division
- Mitosis
- Meiosis
- Apoptosis
- Diploid
- Autosomes
- Haploid
- Sister chromatids
- Centromere
- Cytokinesis
- Telomeres
- Telomerase
- Homologs
- Synapsis
- Crossing over
- Independent assortment
- Stem cells
- Progenitor cells

Be able to explain what is happening to the cell and its chromosomes AND recognize what cells look like during:

- Interphase
 - G₁ and G₂ phases
 - S phase
- Mitosis
 - Prophase
 - Metaphase
 - Anaphase
 - Telophase
- Meiosis
 - Prophase I
 - Metaphase I
 - Anaphase I
 - Telophase I
 - Prophase II
 - Metaphase II
 - Anaphase II
 - Telophase II

Also be able to explain:

- The differences between somatic and sex cells and their formation
- Checkpoints in the cell cycle
- Internal and external factors that affect mitosis
- The results of Meiosis I vs the results of Meiosis II
- Differences between Mitosis and Meiosis
- General sources of Stem Cells
- Basic stem cell applications